

CLAIMS:

1. A network comprising a plurality of network nodes, characterized
in that at least part of the network nodes are directly coupled to each other via at least one
star node,
in that the star node includes a plurality of star interfaces which are assigned to at least one
5 network node,
in that one star interface transfers data from the assigned network node to the other star
interfaces or from another star interface to at least one of the assigned network nodes each
time in dependence on a pilot signal, and
in that also in the event of simultaneous arrival of at least two pilot signals at the respective
10 star interfaces, a decision circuit releases one star interface for the transmission of data.
2. A network as claimed in claim 1, characterized
in that to each network node in the network a certain periodically repetitive time slot is
assigned for the transmission of data, and
15 in that a network node includes a pilot signal generator which generates either a pilot signal
that indicates the whole assigned time slot, or the beginning and the end of the time slot.
3. A network as claimed in claim 1, characterized
in that a pilot signal evaluation circuit is provided for generating a send control signal,
20 in that the pilot signal evaluation circuit is provided for activating the send control signal if a
pilot signal has been sent by the assigned network node and no other star interface having a
higher priority has simultaneously sent a pilot signal from the network node assigned to this
other star interface, and
in that a star interface is provided for transferring data from the assigned network node to the
25 other star interfaces only when the send control signal is activated.
4. A network as claimed in claim 3, characterized
in that each star interface includes a first and a second switching element,

in that the first switching element in the activated state passes data from the assigned network node to the other star interfaces and the second switching element in the activated state passes data from the other star interfaces to the assigned network node, and
in that the first switching element in the event of an active send control signal is in the active
5 state and the second switching element in the non-active state.

5. A network as claimed in claim 4, characterized in that the first and second switching elements are each a switchable amplifier.

10 6. A network as claimed in claim 5, characterized
in that a decision circuit evaluates the send control signals of all the star interfaces, and
in that with a simultaneous occurrence of various send control signals, the decision circuit releases via a decision control signal a certain star interface for the transmission of data.

15 7. A network as claimed in claim 6, characterized
in that a decision circuit includes a chain of in-line decision elements having each an OR gate,
in that each OR gate combines the output signal of the previous decision element with a local send request signal generated by the pilot signal evaluation circuit and indicating the
20 presence of the pilot signal, and
in that the output signal of an OR gate is the decision control signal for the star interface assigned to the next decision element in the chain.

8. A network as claimed in claim 7, characterized in that a decision circuit
25 includes a decision decoder decoding the send control signals, and a 1-from-m decoder receiving the output signals of the decision decoder, which 1-from-m decoder generates a respective decision control signal for the respective star interfaces.

9. A star node in a network for coupling a plurality of network nodes,
30 characterized
in that a star node includes a plurality of star interfaces which are assigned to at least one network node and which, in dependence on a pilot signal, transfer a message from the assigned network node to the other star interfaces, or from another star interface to at least one of the assigned network nodes,

and in that also in the event of simultaneous arrival of at least two pilot signals, a decision circuit releases one star interface for the transmission of data.